



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

TIDEWATER REGIONAL OFFICE

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STATEMENT OF LEGAL AND FACTUAL BASIS

Hercules Incorporated
Ashland Hercules Water Technologies
Courtland, Virginia
Permit No. TRO- 60188

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Hercules Incorporated has applied for a Title V Operating Permit for its manufacturing facility in Courtland, Southampton County. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:	_____ Yen T. Bao (757) 518-2195	Date:	_____
Air Permit Manager:	_____ Troy D. Breathwaite	Date:	_____
Regional Director:	_____ Maria R. Nold	Date:	_____

I. FACILITY INFORMATION

Permittee

Hercules Incorporated
Hercules Plaza
Wilmington, Delaware 19894

Facility

Ashland Hercules Water Technologies
27123 Shady Brook Trail
Courtland, Virginia 23837-2034

County-Plant Identification Number: 51-175-00012

Source Description

NAICS Code 325998 – All Other Miscellaneous Chemical Product and Preparation Manufacturing

The facility is one of three facilities at the site (Ashland Hercules Water Technologies, Eastman Chemical Resins, Inc., and Arkema) that have been determined to be under common control and considered to be one stationary source under the Clean Air Act by EPA Region III on 9/30/2004 and on 11/19/2009. Arkema is appealing EPA decision and the outcome is not known yet. The source is located in an attainment area for all pollutants, is Title V major for VOC and HAP, and a PSD major source for VOC as its potential to emit is above the 100 tons/yr threshold for a chemical plant source category. Ashland and Arkema each has its own Title V permit and Eastman is applying for one; however, Virginia may decide to combine the three permits into one document in the future.

Ashland Hercules Water Technologies (AHWT) currently has a Title V renewal permit dated 2/11/10. The underlying permits are an SOP dated 12/07/04 for its manufacturing process (Aquapel®) and the related wastewater neutralization process with a VOC emission cap of 92.9 tons/year, and a minor NSR permit date 9/29/2009 for a 90 million Btu/hour temporary boiler firing distillate oil that can be brought on-site in case there is disruption of service from its regular steam supplier (Dominion- Southampton Power Station).

II. COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit on 5/12/2011, has been conducted. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

III. EMISSIONS INVENTORY

A copy of the 2010 annual emission statement is attached. Emissions are summarized in the following table.

2010 Actual Emissions in Tons/year

Emission Unit	VOC	Non-VOC HAP
Aquapel® Process	60.49	6.93
Total	60.49	6.93

IV. REQUESTED MODIFICATION

The facility applied on 10/1/2010 for a minor NSR permit to install and operate two boilers, up to 40 million Btu/hr each, burning natural gas as primary fuel with No. 2 fuel oil as back-up fuel during natural gas curtailment, and a tank up to 20,000 gal capacity for fuel oil storage. The new boilers are to replace the steam supply from Dominion- Southampton Power Station. The permit was issued on 2/17/11. This Title V permit modification is to incorporate the conditions from the minor NSR permit. The facility had submitted an application for this modification at the same time with the minor NSR permit application. Both applications contain no Confidential Business Information even though the facility has a claim of confidential information that was accepted by DEQ on 2/23/98.

V. APPLICABILITY OF 9 VAC 5-80-230

This Title V permit modification will add new emission units with all associated emission limits and other applicable requirements from the 2/17/2011 minor NSR permit. Therefore, this modification will be processed using the Significant Modification Procedures as defined in 9 VAC 5-80-230.

VI. CHANGES TO TITLE V OPERATING PERMIT

The two proposed boilers (ES-B1 and ES-B2) are added to the list of Emission Units. The proposed fuel oil tank (IS-T-2) is listed under Insignificant Activities section because the tank is not subject to NSPS Subpart Kb due to the low vapor pressure of fuel oil and has a low potential to emit.

A new section is added to incorporate the 2/17/11 NSR requirements on the new boilers (Section **IV. Fuel Burning Equipment Requirements— Two Natural Gas and Distillate Oil Boilers (Emission Unit ID# ES-B1 and ES-B2)**). The other sections are unchanged except for their numbering and the above changes in the equipment list and the list of insignificant activities. The new section content is discussed below.

A. Limitations

Low NO_x burner is required as BACT. In addition, fuel sulfur content is limited to 0.2% and visible emission is limited to 10% opacity except during one six-minute period in any one hour in which visible emissions shall not 20% opacity as determined by the EPA Method 9. Those conditions are more stringent than required by NSPS Subpart Dc. The boilers are also subject to MACT DDDDD when it becomes effective. The facility has indicated that it intends to

meet the definition of “unit designed to burn gas 1 (NG/RG) subcategory” in the MACT for boilers that burn at least 90% NG/RG on a heat input basis on an annual average. Fuel throughput limit is set for distillate oil but not for natural gas as the latter has lower emissions per hour or per heat input for all criteria pollutants except for CO. The annual emission limits are based on the worst case fuel for each pollutant.

As the facility wants to retain the 9/29/2009 permit for a temporary boiler (TB-1), Condition IV.A.4 ensures it does not operate at the same time with the new boilers except during the transition period when one of the boilers (ES-B1 and ES-B2) is being brought back on line after being down and the temporary boiler (TB-1) is being taken off line. This restriction prevents exceedance of the PSD significant level for SO₂.

B. Monitoring

The visible emission observation requirement for any week that fuel oil is burned in Condition IV.B.1 of the 2/17/11 NSR permit meets Part 70 requirements.

C. Recordkeeping

The permit includes requirements for maintaining records of all monitoring, testing, fuel information, maintenance, operator training, notification and reports as required by the permit. Records of fuel usage include the monthly usage of each fuel as required by NSPS Subpart Dc, and the annual consumption of distillate oil to demonstrate compliance with the throughput limit.

D. Testing

The permit requires initial visible emission evaluation by Method 9 as required by NSPS Subpart Dc while firing distillate oil.

The Department and EPA have authority to require additional testing not included in this permit if necessary to determine compliance with an emission limit or standard.

E. Notification and Reporting

Permit requires initial notification and semi-annual fuel reports in accordance with NSPS Subpart Dc.

F. Streamlined Requirements

Most General Conditions in the 2/17/11 NSR were streamlined because they are already represented by the Title V General Conditions except for the following:

- Portion of the Maintenance/Operating Procedures Condition 22 of the 2/17/11 NSR which is not in Title V General Condition O is now Condition IV.A.11.
- The Permit Invalidation Condition 19 of 2/17/11 NSR that sets the time limit to begin construction of the boilers unless an extension is granted is now Condition IV.A.12.
- The Violation of Ambient Air Quality Standards Condition 25 of 2/17/11 NSR is not a Title V General Condition; however, it is already included under Section VI. Aquapel® Process Equipment Requirements.

VII. CONFIDENTIAL INFORMATION

The source submitted a list of proposed confidential business information dated February 3, 1998, and received on February 5, 1998. The DEQ concurred with the proposed list of information in a DEQ letter dated February 23, 1998. The Title V permit has been written to be self-explanatory but without any confidential business information so that it is suitable for public review. The permit applications for the two new boilers contain no Confidential Business Information, hence, the 2/17/11 NSR permit and changes made to the Title V permit also contain no Confidential Business Information.

VIII. PUBLIC PARTICIPATION

The proposed permit will be place on public notice in the Tidewater News from August 19, 2011 to September 19, 2011 .